	h	m	s	
First limb of ball	16	0	29·1	G.M.T.
Last ditto ditto		0	46·0	
Inner edge of ring		1	7·3	
Last ditto ditto	16	1	15·9	

Lens $3\frac{1}{2}$ inches; Power 110.

Lat. 53° 28′ 24″ N.
Long. $0^h\ 12^m\ 6^s{\cdot}9$ W.

Waterloo, near Liverpool,
May 10, 1870.

Observations of Algol; of Occultations of Stars and of Saturn by the Moon; and of Sun-spots. By C. F. Penrose, Esq.

The position is

Latitude 51° 24′ 58 N.
Longitude $0^h\ 0^m\ 55{\cdot}1$ W.

Algol.

			G.M.T.
Minima observed by estimation	1869	Oct. 11	$10^h\ 50^m$
	and	Dec. 18	$6^h{\cdot}7$

These observations, which represent the phenomena certainly within 10 minutes, show that the period of 2·86727 days which has been assigned, combined with an epoch given for Jan. 3, 1844, in the *Outlines of Astronomy*, requires a slight correction. These minima occurred nearly 3 hours earlier than if due to those data. The value 2·867234 would better satisfy them.

Occultations as follows:—

1869, Aug. 2.

			G.M.T.
Aldebaran	Reapp.	Dark limb	$13^h\ 13^m\ 37^s$

1870, Feb. 2.

m Tauri	Disapp.	Dark limb	$9^h\ 7^m\ 14^s{\cdot}9$

April 19th.

Saturn.

At Disapp. Bright limb

		G.M.T. h	m	s
First contact of Ring	..	14	55	30
Ball apparently bisected	..		56	17
Final disappearance of Ring	..		57	5

		h	m	s
At Reapp.	Dark limb			
Ball bisected ..	..	16	5	2
Ring clear of Moon	..		5	52

Of these occultations the two first have been subjected to calculation. That of *Aldebaran* accords with the longitude within a very few seconds. In the case of *m Tauri* the discordance is greater (viz. about 13^s), but the occultation was far from a central one. The Moon seems to have been behind, or above, or both, as repects her tabular place.

Several Sun-spots have been noticed exhibiting a remarkable appearance when near the limb, especially on March 25 and April 25, a sketch of the latter is submitted.

If the Sun-spots are cuplike or conical depressions and symmetrically placed, or nearly so, with respect to a normal or solar plumbline, the breadth of the nearer margin would invariably be less than that of the further margin when near the limb, and would even disappear on approaching it (which is the general phenomenon). That, of which the sketch is submitted, on April 25, was about 25° from the limb, and exhibited its nearer margin equal in breadth to the further one. By the imaginary section through the photosphere it is shown how very oblique must have been the axis of the cavity around the spot on the hypothesis of its cuplike shape.

Colebyfield, Wimbledon.

Note respecting η Argûs. By H. A. Severn, Esq.

(*Extract of Letter addressed to the Astronomer Royal by Henry A. Severn, Union Bank of Australia, Melbourne, Victoria, received April* 1870.)

"I may say that I cannot confirm the new position given to *η Argûs* in respect to the Nebula. I have watched it for 14 years, and it is just where it was; of course much less brilliant."

Instruments, 13 in. front view reflector, of his own construction, and a $3\frac{3}{4}$ in. refractor.

Comparisons of the Places of certain Stars, as given in the Second Radcliffe Catalogue, with the Places given by Dr. Wolfers in the Tabulæ Reductionum. By Dr. Wolfers. Translation.

Extract of a Letter from Dr. Wolfers to the Radcliffe Observer.

"I beg to offer my best thanks for the copy which I have received of the Second Radcliffe Catalogue of Stars, presented to me by the Radcliffe Trustees.